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105

OBSERVATIONS
ON THE
Sancti
INFLUENCE OF THE MOON

ON CLIMATE,
AND THE ANIMAL ECONOMY:

WITH
A PROPER METHOD OF TREATING DISEASES,

When under the power of that Luminary.

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P R E F A C E.

PREVIOUS to entering upon the subject of the following pages, I would merely premise, that I was but a short time in the practice of physic, until I observed the influence of the New and Full Moon, in occasioning the first attacks, and producing relapses, in the diseases of the city of Philadelphia. Upon first putting my observations on paper, I intended to have published them, without taking notice of any of the authors upon the subject; but, after shewing my notes to one of my medical friends, a professor, and taking his advice, I suspended the design of printing, until I examined those writers who had taken notice of the Influence of the Moon on the diseases of the human body in other climates.

These observations are now presented to the Public, supported by quotations from the learned: Some of the facts which I looked upon as my own, were, I find, known before this, although a disappointment, has strengthened those which I now give to the world; and which, I hope, will meet with a candid examination before they are rejected; for new truths are always at first badly received, because, as celebrated Helvetius observes, "they shock the vanity of some men, and contradict opinions generally received."

Philadelphia, July 31, 1795.

OBSERVATIONS

ON THE

INFLUENCE OF THE MOON, &c.

APR 23
IN taking notice of the influence of the moon on the diseases of the human body, I shall make a few observations on her effects in the climate of the United States; show her influence on persons in perfect health; and, in speaking of diseases, follow the systematic order as laid down by Dr. Cullen.

Of the Influence of the Moon.

CLIMATE.

ABOUT forty-eight hours previous to, and succeeding the new and full moon, all nature appears to be affected; a warm south-west wind generally prevails; the barometer sinks to 29 and $28\frac{1}{2}$; and the thermometer rises from 15 to 25 degrees: * a cold

* In the Ephemerides of the Palatine Meteorological Society of Mannheim for the year 1781, Mr. Hemmer observes "of the barometer, the greatest elevation, in the course of the year, coincided with the new moon, and the day after its apogee. All the greatest elevations of each month, except one, and all the least, except four, coincided with a lunar point, or the day preceding, or the day following one. From the new moon to the full, the mercury has a tendency to ascend; from the full, to the new moon, it has a tendency to descend; it is, also, higher towards the apogee, than towards the perigee of the moon. Of rain and evaporation, it is observed, that the most rainy days coincided with the day preceding the eve of a lunar change, seldom with the apogee or perigee of the moon."

Under the New-York head of October 9th, 1797, we have the following: "Last Tuesday was a very warm day for the season,

52/516

dense and heavy air from the north-east rushes in to supply the place of this rarefied air, which continues to blow sometimes two or three days, attended with thick clouds and rain, obscuring the whole atmosphere, and often does considerable damage along the coast and wharves* : it was one of these storms that prevented Dr. Franklin from observing an eclipse of the moon in the year 1760.

Within the periods, or on one of the two days which immediately precede and follow the new and full moon, high winds, storms,† hurricanes,‡ tempests,§ tornadoes, and earthquakes,|| are always expected, or if a storm or tempest is then in being, the most

the thermometer rising to 72" in the country, and something higher in town; during the day, a sudden change took place in the weight of the atmosphere; the mercury, in the barometer, fell half an inch in a short time: the effect on the springs of the musical clock, in Mr. Baker's Museum, was so great as to render its movements uncommonly rapid; and to reduce them to their usual celerity, it was necessary to relieve the machinery of fifteen or twenty pounds of its usual weight. The fact is related by Mr. Baker himself, and deserves to be recorded, as a curious and not unuseful fact. The hot unelastic or light air, was observed about 36 hours before the full of the moon.

* An antient author says, "the moon, by rendering the air lighter, lays a foundation for a greater quantity of vapours being raised, and, is therefore, found to occasion rainy weather."

† The Rev. Mr. Winterbotham, in his account of Bermudas, says, "the storms generally come with the new moon."

‡ Three most violent hurricanes of Great Britain have been preceded by an eclipse of this luminary.

§ The moon is thought by the Indians to preside over tempests.

|| An earthquake was felt at Manchester, Bolton, and Bowdon in Cheshire and other places in England, on July 17th, 1795, at half past three o'clock in the morning: The particulars were published in London on the same day, including the state of the atmosphere, as follow, "the moon had changed the preceding morning at half past seven, the barometer changeable, thermometer temperate, the air obscured with clouds, thick and much agitated with gusts of wind and rain at intervals from the western quarter."

At nineteen minutes past six o'clock in the morning of the thirty first of January 1794, the sun was in an eclipse. At the same hour we had a new moon, and about two o'clock at Gosben, a noise similar to distant thunder, with a tremulous motion of the earth, was heard in

commonly moderates it*. Within the periods, our tides in the Delaware generally rise from one to two feet higher than in the intervals.† This is so well known, that some of our ship-carpenters wait for the periods before they launch their vessels.

I believe the water, when the moon comes towards her meridian, is at its greatest height; because the atmosphere, from the elevation of the column of air directly under her meridian, is diminished in weight and pressure; and not more depressed, according to Dr. Franklin, who says, “the tide is a wave, and a wave, a tide in miniature; and that the wave follows her two hours, after she passes the meridian.”

The United States are most subject to inundations at the new and full moon; which is to be accounted for by the high winds, occasioning the sea to flow in the rivers with a strong current, which check the tides, and cause them to overflow the low lands.‡ The lakes on our continent are, likewise, it is well known, influenced by this luminary.

This town and adjacent country; it proceeded from north west, and continued three or four seconds—This earthquake was certainly connected with the revolutions of the Moon.

* In the Philadelphia Gazette of January 2d, 1797, we have under the New-York head of December 31, 1796, the following fact: “it is an observation justified by long attention, to the course and changes of weather, that the prevailing winds and weather of the last quarter of the moon run into the three succeeding quarters. We may, therefore, expect, that, excepting slight or temporary variations, the last quarter of the moon will afford a specimen of weather for the three succeeding weeks.—The severe cold weather, and westerly winds, this last autumn, began in the last week in November, and in the last quarter of the moon. The severe winter of 1779, 1780, began about the same time; very soon after the 20th of November, with a fall of snow in the last quarter of the moon.

† Dr. Ramsay of S. C. says, “tides in Ashly and Cooper rivers, in common, rise and fall five feet; but at the new and full moon seven feet.”

‡ On the twenty-eighth of May 1794, we had a new moon, thirty-five minutes past seven in the afternoon, the tide was higher in our river, by three inches, than it has been known to be by the oldest inhabitants.

Of the influence of the moon on people in health.

The influence of this planet, on the animal economy, has been remarked by many authors, from the venerable Hippocratis to the ingenious Darwin, and particularly by the Arabian physicians ; by Galen, Baglivi, Van Helmont, Ballonius, Ramazzini, Pitcairn, Mead, Sir Hans Sloan, Floyer, Grainger, Gregory, Balfour, Musgrave, Lind, Wilson, Mosely, Leake, Tyson, Wade, Jackson, Laing, and the late Dr. Smith of New-York.

Within the periods, the pulse is generally more quick and tense than in the intervals ; and respiration is more free and easy : hence, an agreeable sensation of heat is perceived, and vigour is imparted to the whole system.

Persons in health appear to drink more at the full and change ; a plethora is induced in the system ; the appetite of thirst is much increased, and, perhaps, one-third less of the usual quantity of liquor is required to make a man drunk at this time, than in common. This has been particularly observed by the friends and acquaintances of Mr. J—— R——n of this city.

The appetite for animal food is not increased ; the determination to the alimentary canal is diminished, while that of the insensible perspiration of the body is much increased ; the quantity of fluids in the vascular system is more considerable.

Impressions, made on the senses, excite quicker sensations and reflections. The secretions are increased ; and hence, I have often observed mothers and nurses, in general, who are suckling children, afford more milk at this time.

The young and old, from their accumulated excitability, are more sensibly affected than the

middle-aged. A Mr. Rofs, rope-maker, of this city, has a daughter seven years old, who enjoys a good share of health, except at the periods, when she falls in a syncope, which lasts ten or fifteen minutes: when she recovers from this state of insensibility, she enjoys her usual good health until the periods return, when, unconscious, she is seized as before.

In Hartford, state of Connecticut, Dr. T. was found dead in the street: he was going from his neighbour's to his own house, January 31, 1794, and on the same day, hour, and minute the sun was in an eclipse with a new moon.*

On the mind it produces the most powerful effects; † as an equanimity of temper, a disposition to cherefulness, and an aversion to anger in people of irascible dispositions; perhaps there may be discovered in the atmosphere, a mixture of airs at the periods favourable to the intellectual faculties: in this state of the mind, physicians visit their patients and relations; their friends labouring under contagious diseases, and are not so liable to receive infection.

* Mallet, in his life of lord Bacon, page 147, says, "one singularity there was in his temperament not easily to be accounted for. In every eclipse of the moon, whether he observed it or not, he was suddenly seized with a sudden fit of fainting; which left him without any remaining weakness, as soon as the eclipse ended."

Sully, in his Memoirs, Vol. 4. p. 285, speaking of the total eclipse of the sun, which happened in the year 1605, says, "this remarkable old man, Theodore Beza, was seized with an illness in the eighty-seventh year of his age, which, before the eclipse of the sun, was very slight, but grew fatal from that moment; and a few days after, put a period to his existence."

In a note to the above sentence, there are these observations: "many strange maladies, of different kinds, raged at Paris at that time; and together with the eclipse, eclipsed many persons who have never been seen since. Dysenteries, especially, were very mortal and dangerous, and more in other places than at Paris, few who were attacked escaping them"

† We are informed by Dr. Gregory, that the full moon had a most wonderful effect on the mind of the celebrated Chatterton, his poetic vein flowing impetuously upon him at this time.

Effects of the moon's influence on diseases.

The revolutions of the moon appear to affect fevers in a very considerable manner, which is of great consequence in their prevention and cure.

The influence of this luminary in this class of diseases, is more powerful on one of the two days, which immediately precede and follow the full and change, than those on the intervening days, or intervals; so, when I shall speak of these periods, I shall conclude four complete days at each.

I observe the most influence, the nearer we are to those periods; with respect to the two, the full seems to have most power, which is agreeable to her situation and proximity.

The first attacks of fevers, (particularly the bilious, remitting, and intermitting,) are most frequent, their symptoms more violent, and more difficult to cure at the periods.* Vomits are principally of fer-

* Dr. Benjamin Mosely, speaking of the climate of the West Indies, p. 112, says, "and though the moon has unquestionably great influence on crisis, and relapses in continued and intermittent fevers, yet lunacy is almost unknown."

And in a note, at the bottom of the same page, he says, "In the spring of the year 1777, I remarked that most of the patients whom I attended in fevers, were much affected in the head at every new and full moon; I have observed the same thing often, but never so uniformly as in that year."

Dr. Robert Jackson, in his treatise on the fevers of Jamaica, p. 58, says, "the approach to new and full moon, appears to be connected with the invasion and relapse of fevers, in a very remarkable manner."

In page 63 and 64, he says, continuing his observations in America; "at the beginning of August, 1778, the encampment was at Kingsbridge, where it occupied a very unhealthy situation; when the regiment moved from their ground in the beginning of November, of one hundred cases of intermitting fever, which were marked in the almanac, eighty were found to have commenced in the usual period of invasion; that is, in the second and last quarter of the moon. This regiment embarked for Georgia in November, and remained there until the capitulation at York-town. The sentence is concluded by this observa-

vice at this time, in these diseases, as there is mostly a disposition to puke, from an immense quantity of acrid bile in the primæ viæ.

The effects of the moon's influence upon the human body, may, in some degree, be accounted for, by a change in the qualities of the air, and not by any supernatural or incomprehensible manner.

The proportion of oxygene empyreal or vital air is encreased, and hydrogen or inflammable air diminished—first, by the winds that prevail at the periods, which unite, absorb and carry off, an over-abundance of noxious vapours, generated by the calmness, warmth, and closeness of the atmosphere in the intervals, so pernicious to animal and vegetable life : secondly, the rains : thirdly, thunder and lightning : fourthly, by rising of the lakes and rivers, which expose a larger surface to absorb and attract impure air : fifthly, by the increased perspiration of vegetables, absorbing impure, and giving out pure air : sixthly, the influence of the light of the moon at night, (contrary to Dr. Priestley, who says, “vegetables don't give out pure air from the dark :”*) and seventhly, by the exhilarity observed in people in health ; as it is generally allowed, the more pure air, the more the spirits are raised.

Of the bilious remitting, or yellow fever, of the year 1793, the first attacks, relapses, and deaths, were more frequent at the periods, than during the intervals. This was observed of the plague of Nimeguen, by Dicerrerae in the year 1636.

Persons of weak nerves, and debilitated bodies, are most subject to an attack of the typhus mitior within

tion, “of this, however, I am certain, that even at times of the greatest epidemic sickness, when the connection was evidently weakest, the number of the sick was generally doubled in the periods approaching to new and full moon.”

* Dr. Wilson, from experiments, says, “the moon-shine ripens fruits, and encreases the growth of plants.”

the periods ;* when their countenance appears sunk, their eyes clouded and dry, with a high colour, and heat in their cheeks, which shew a determination to the head ; while the end of the nose, the ears, and extremities are cold ; here, if evacuants are not directly used, a typhus gravior frequently ensues, and may be known by the meagre face, eye-lids closed or half shut, with other fatal symptoms.† Perhaps the encreased circulation of the fluids, in the system at the change and full moon, renders the body more alkalescent : may not this be the reason why phlogosis, sometimes in a few hours, puts on symptoms of gangrene and sphacelus. This was particularly noticed in the case of a butcher in Spring Garden, in the month of January, 1793, who had an inflammation between his thumb and fore finger, about the time the moon was full, when, in a few hours, a gangrene appeared, which put an end to his existence.‡

* The inaugural dissertation of Dr. James Lind on the putrid fever, and the experience of Dr. Francis Balfour, furnishes many proofs of the influence of the full and change in this disorder.

† The late Dr. William Pitt Smith, health-officer of the port of New-York, in a letter to Dr. S. Duffield, of Philadelphia, says, “ the severity of the first attacks, often appeared to determine the event of this complaint ; and this severity has seemed, in some instances, to depend on some unknown influence, in a curious manner. I have been astonished to find that a large proportion of the deaths of five successive days, were patients all taken sick within twelve hours of each other, and that most of those who recovered, were severely handled. This remark will be found particularly true in respect to those who were taken sick on the 12th and 13th instant (Sept. 1795.) After ascertaining the fact, I was surprised to find that the new-moon took place in the morning of the 15th, that the thermometer had stood much higher late in the morning of the same day, than at noon, and that for three days, the barometer had not varied in the least sensible degree.”

‡ Dr. Hans Sloan, in the introduction to his history of Jamaica, P. 106, mentions a strange disease in a black woman, whose fingers and toes were filled with bladders of water, which mortified. He also says, p. 107, “ I have seen more diseases than this come on exactly at these times, (periods of the moon) but they have generally been epilepsies, or other diseases of the head, and have not been so visible as these vesicles of water above mentioned.”

The exacerbations of the hectic fever, are often more violent, and of longer duration at the periods, than in the intervals, in persons between the age of eighteen and thirty-six, which is observable by the circumscribed cheeks, while the rest of the face is pale and appears dirty; the pulse being tense and full. I have ordered blood to be drawn at this time with the most happy effects.

Many local complaints, such as head-ach,* tooth-ach,† ophthalmia, obstructions of the glands, spasms, cutaneous eruptions, and diseases of the urinary passages,‡ often return periodically with the moon, attended with fevers, and are sometimes more violent and obstinate than in the intervals, with no fever.

Persons about the prime and vigour of life, are frequently liable to violent and fatal attacks of the ideopathic and symptomatic phrenitis, on one of the eight days of the periodical revolution of the moon; for the action of the sanguiferous system and insensi-

* We had a new moon on December 18th, 1792, at five o'clock. a Mrs. H——, aged thirty, and a Miss A——F——, aged twenty one, both of delicate habits, were seized, the former on Thursday the thirteenth, and the latter on Sunday the sixteenth, with an acute pain in their heads; and on Sunday, the case of a gentleman aged thirty: the pain was attended with such a delirium that he attempted to jump out of a window. These cases were relieved by bleeding.

Another gentleman who was seized with the above symptoms, shot at his wife, and attempted to destroy his child about the same time.

Dr. Alexander Wilson says, “there are instances of particular people, who, from some delicacy of constitution, have most violent head-achs, if they stand a quarter of an hour uncovered, exposed to the full moon.”

Dr. John Leake, on the diseases of the viscera, p. 401, says “periodical head-achs, as well as fluxes of blood from the nose, lungs, or weaker viscera, also happen more frequently at this time than any other, especially about the equinoxes, when the influence of this planet is considerably encreased.”

† Dr. Darwin says, “inflammatory rheumatism, with debility, seems to obey lunar periods.”

‡ Dr. Mead says “nephretic cases return at the full moon.” P. 186.

See Dr. Balfour on the influence of the moon, in fevers in Bengal, a part of India, in the East-Indies.

ble perspiration, at this time, are encreased, the quantity of fluids is more considerable while they are mostly costive; the afflux must be encreased in the ascending, and by the torpor of the bowels, diminished in the descending aorta. From experience, which I have had, I am disposed to conclude, that evacuants must be more necessary at the periods, than in the intervals.

A greater number of people are seized with the different species of the cynanche, which appear more fatal and dangerous at the periods, than in the intervals of the moon. From my knowledge of the above facts, I have been assisted in preventing, curing and prognosticating in this destructive disease. T—— W—— had a child three months old, who appeared from its birth to enjoy the most perfect health, until Friday the 3d of April, 1795; when an eruption appeared on the skin: in the evening the child appeared uneasy with an oppression at its breast; but, on the next morning, (Saturday) the fourth of April, was found dead along-side of its mother: I shall remark, that on this morning, at ten minutes past five o'clock, there was a full moon, and within the periods at this time, two others shared the same fate.

Delicate women, and female children with black eyes and irritable habits, are most subject to first attacks of the cynanche maligna on the periodical return of the moon, and relapses in the intervals, when the most common symptoms that appear are a synochus fever, attended with delirium, the pulse quick and tense, the eyes watery, red and inflamed, the glands, tonsils and uvula tumefied, and put on a crimson colour, skin of a red tinge and full of pimples. From these symptoms, this appears to be an inflammatory disease: hence, evacuants may be employed with

great safety : favourable changes seldom occur until the intervals.

Weak and irritable habits, with a sanguine constitution, and bad confirmation of the breast, renders them more subject to pleurisy at the periods, which in our climate assumes more of a bilious nature at this time, as there is an increased secretion, and a greater quantity of bile than in the intervals*. When the symptoms of this disease are violent and difficult to remove, unless great attention be paid to the evacuation of the primæ viæ, which I consider to be loaded with the redundant bile which acts as one of the exciting causes, it sometimes requires one-third more blood to be taken away during the periods, than intervals, to effect a speedy and effectual cure. In the lower parts of the Delaware state, some people are particular in bleeding two days before and after the full and change of the moon, and think a fatality attends if blood is not drawn at this time. Venæ section in some cases succeeds better with children than adults at the periods. It is often more proper for women, than men. Smaller quantities of blood are required to remove inflammatory diseases in negroes, which they appear not so subject to, especially at the periods, as white people.

The gout always begins in a plethoric habit, whether it depends on a particular confirmation of the structure of the body or other causes, as the influence of the moon at the periods. Hence relapses of this scourge of intemperance are frequent at the periods.

I prefer inoculating for the small-pox at such a time as to cause the eruption to happen in the intervals ; this is agreeable to the practice of Dr. Balfour ; because the danger of the eruptive fever is en-

* Mr. R——d W——ls, of Bedford County, surveyor, informed me, that the beaver have a greater quantity of castor at the new and full moon, than at the intervals.

creased, and most apt to run from the distinct into the confluent species, at the full and change of the moon. On the twenty-fifth of February, 1793, at six o'clock in the afternoon, the moon was full, and I was sent for to see a child eighteen months old, labouring under this disease, who had been laying three days with an eruption: the evening before I saw her, twelve purple spots appeared. A brother to this child was seized with this disease in the intervals, who had them very moderate, and recovered without the aid of a physician. At the periods, the lungs and throat are often most affected, the bloody pustules sometimes appear. The fever, from being an intermittent, frequently degenerates into a continued type; and I have known the contagion, in two cases, to lay dormant sixteen days in the system, and not become active until the full moon. I had a patient, who received the contagion on the beginning of the first quarter of the moon, and nine days after no symptoms of the disease appeared; but two days before the moon filled, the arm was inflamed, a fever came on, and my patient received the infection. Dr. Darwin says, "in the distinct small-pox, the vestiges of lunation are very apparent."*

* Edward Laing, surgeon at New South-Wales, in a letter to Dr. Trotter, says, "when the Pitt left England, on the 17th of July, 1791, she had on board near six hundred souls: we had the small-pox on board when we sailed: ten convicts and two sailors were ill of this disease. On the 28th, as no more convicts had received the infection since we left England, we began to flatter ourselves that the disease had run through all those who had not had it: but I was surprised on the 29th and 30th, to find six or seven more attacked, all within the space of twenty-four hours. As the weather was now more favourable than it had been, my surprise was increased. On reflection, I could not discover any satisfactory reason for the sudden re-appearance of the disease; having heard something of lunar influence in fever and infection, I was induced to look into my almanack, when I found that the moon had changed about this time; and I likewise found, that, the first ten or twelve attacked, must have happened a month before."

The measles were epidemic in the springs of 1788 and 1790 in Philadelphia, when the prognosis was more unfavourable at the periods than intervals, and more so to old than young people.

Robust persons of both sexes, are often liable to first attacks of the scarlitina anginosa at the periods, when the eyes are of an intense redness, and other symptoms denoting an approaching delirium to take place: this disease, especially at this time, is most frequently attended with a synochus fever, and the symptoms are violent and obstinate, and in all the cases that I have seen, great inflammatory diathesis appeared. On the twenty-first of January, 1793, being within the period of the full moon, I was called to see three cases of the scarlitina anginosa, when great phlogistic diathesis appeared. A Miss S—D— of this city, aged twenty-five, and a child of Mr. Smith's, I have known to have four attacks at the full moon.

Persons between the age of thirty and forty, of plethoric sanguine constitutions, are often liable to first attacks and relapses of the erysipelas.

In consequence of the attracting power of the moon at the periods, a part of the external pressure or weight of the atmosphere is removed, and the body allowed to dilate itself; hence, debility or relaxation is produced on the surface, which is a predisposing cause of hæmorrhagies, causing congestion, plethora, and excitability.*

Young people of large heads, from a cessation of growth, or from a peculiar state of the system, at this time, are most subject to epistaxis, when it often appears with the symptoms of syncope. Drs. Mead and

* Dr. Musgrave relates the case of a hæmorrhage from the thumb of the left hand, which happened at the time of lunation.

Dr. Darwin says, page, 502, "perhaps the venous hæmorrhagies obey the lunar periods as the catamenia and hæmorrhoids."

Musgrave have published cases which confirm the above observations.†

Persons from the age of sixteen to thirty five, who have a narrow chest and prominent shoulders, and are of a slender, delicate make, and lax fibre, and who are endowed with much sensibility, irritability and quick parts, are most liable to first attacks and relapses of this disease at the periods. In October, 1793, on the day of the full moon, I was called to a Mrs. Lee, aged thirty five, and in October, 1794, a daughter of Mr. Beck, seventeen years of age, and found them laying on their backs almost exhausted from an excessive discharge of blood from their lungs: in both cases, I was assured that the moon often brought the disease on,‡ and that they had relieved themselves, by losing blood before the periods arrived.

The phthisis pulmonalis never discovers its peculiar symptoms, without discovering, at the same time, phlogistic diathesis of the whole system, which most frequently occurs at the new and full moon; when women, more than men, and sedentary, weakly and irritable habits, between the age of sixteen and thirty six, are most subject to first attacks and have relapses of this reproach of the medical art.

A costive habit, being peculiar to the periods, and a remote cause of hæmorrhoids, people, and more generally women of a plethoric and sanguine habit, when the system is more often affected in a general than partial manner, with the characteristic symp-

† Dr. Pitcairn's own case, of epistaxis in the new moon of February, 1687, on the day and hour of the new moon. See Mead p. 183.

‡ Dr. Mosely says, page 545, "the greater hæmorrhagies from the lungs, or those of plethora, like all periodical hæmorrhagies undisturbed in their natural course, by peculiar circumstance obey the influence of the moon. Of this, I have many proofs; and that they are not more authenticated by others, is owing, I believe, to the theory, on which the fact depends, not being sufficiently known to prevent the result escaping unnoticed."

Dr. Darwin says, "the periods of hæmoptoe sometimes obey lunar periods, recurring monthly."

toms of a pain in the head and rectum, are subject to first attacks and relapses at the periods. On the sixteenth of July, 1795, I was called to see two cases of this disease, in the morning of which day, we had a new moon.

As the return of the catamenia depends on the force of the uterine arteries, impelling the blood to their extremities, and this force is always considerably encreased at the new and full moon, I never knew or heard of a woman, whose periodical discharge was not, in some degree, influenced by this planet. The most barbarous nations, and all antiquity, are of this opinion. Hippocrates, Galen and Dr. Mead has made some observations similar to the above.* In plethoric females this discharge sometimes proceeds to excess, and produces a complaint, known by the name of menorrhagia.

The amenorrhea usually attacks females, a little after the time of puberty, and generally returns every new and full moon, with an excess of action, in both the arterial and venous systems, with a fever in the beginning; the face becomes pale, and then assumes a greenish, livid or yellow colour; the eyes are sunk in their sockets, with a blue circle round them; the lips are colourless, and the whole body appears swelled. In the cure of this affection, evacuants may be used with more safety at the periods, than in the intervals.

Diseases of pregnancy are apt to appear and return at the periods, perhaps from a diminished proportion of oxygene in the atmosphere; and may be relieved by the liberal use of the lancet.

Parturition is often more difficult at the periods than in the intervals, and also in delicate constitutions. Large evacuations takes place at this time. Hence there is the greatest possible danger. This I experienced in an amiable, delicate lady, in the month of August

* Dr. E. Darwin in his *Zoonomia*, vol. i. page 498, says, "the periods of female menstruation, are connected with lunar periods, to great exactness, in some instances even to a few hours!!"

1792, who enjoyed life only four hours after delivery.

Weakly women, of lax solids, who have had many children, are often liable to an abortion at the new and full moon. Perhaps the reason why we find the same parents produce one child healthy and robust, and another sickly, weakly, and delicate, is, that the former was born in the encrease, the latter in the decrease of the moon.*

I shall digress a moment, in order to corroborate this observation further, by a few facts taken from the animal and vegetable kingdoms. First, I have often heard it said, fattened meat killed near the full moon will not shrink from the bone nor decrease in weight, but will look full and plump when cooked, but if killed in the intervals, will do so; I would also observe here, that, animal food, killed at the periods, is rather more alkalescent and of more easy digestion, owing, perhaps, to the encreased circulation of the blood in the animal. Second, young bees, if they lodge in the decrease of the moon, appear to produce little or no honey, and a number die; but if in the encrease, they commonly produce as much, if not more, than the old. Third, oysters, crabs, lobsters and muscles† are more fat and plump at the full than new moon. Fourth, at the periods crabs often change their coats or shells, and clams, at those times, most always change their beds, where they had remained sunk during the winter.

* The venereal orgasm of birds and quadrupeds, seems to commence, or return about the most powerful lunations at the vernal or autumnal equinoxes; but if it be disappointed of its object, it is said to recur at monthly periods; in this respect resembling the female catamenia, whence it is believed, women are more liable to become pregnant at or about the time of their catamenia, than at the intermediate times; and on this account, they are seldom much mistaken, in their reckoning of nine lunar periods from the last menstruation. The inattention to this may, sometimes, have been the cause of supposed barrenness, and is therefore worth the observation of those who wish to have children. Darwin's *Zoonomia*, vol. i. p. 499.

† This observation is confirmed in Hughes's *Natural History of Barbadoes*.

From the vegetable kingdom, I shall only mention two, among many facts in my possession. In order to make trees of any kind durable, cut them down on the day on which there is a new moon ; the grain will be fine and devoid of sap, but if deferred for a few days, the grain of the wood will be coarse and full of juice. This is attended to by some of the planters of the southern states of America.*

The epidemic catarrh, of the fall 1789, and of the spring, 1790, appeared to be propagated a greater distance, affected a greater number of people, and was more universal within the eight days of the change and full moon. I have known whole families, and even different animals, attacked with it at the above periods. In many cases, there was an uncommon afflux of fluids to the head, with a considerable discharge of blood from the nose, and in some, the disease was attended with symptoms of pneumonia notha, coma and mania ; when the pulse was hard, fever continued, respiration laborious ; persons of both sexes, between the age of eighteen and thirty six, of irritable habits, were most subject to the latter symptoms at the periods.

First attacks and relapses of the dysentery, frequently attend the periods : the fever is remitting, sometimes continued and inflammatory ; a nausea is a more frequent symptom at the periods, than in the intervals, from the excretion of a larger portion of bile in the primæ viæ : bleeding is only necessary, if at

* Marshall, in his *Arbustum Americanum*, speaking of the oak rags, says, it may not be improper here, to make some remarks with respect to felling or cutting of timber. Long experience I think has sufficiently ascertained, that timber in the third and last quarter of the moon's age, is much more durable than when cut at any other time. That the moon materially affects timber, is a fact well known to those who strip bark for the use of tanners. It is a fact sufficiently well known, that timber whose bark has been separated and peeled round the butt, if done in the decrease of the moon, retains its greenness often a considerable time, but if in the encrease, withers in a much shorter time. From hence, I think, we may conclude, that the sap of trees has a kind of monthly circulation, ascending in the moon's decrease, but descending in the encrease.

all, in our climate, to diminish the encreased action of the arterial system, and vomits for the removal of the bile, which should be persisted in, as long as the symptoms that required them continued.

Perhaps the reason why apoplexy so frequently attends the periodical revolutions of this influential planet, is the calm that attends her, occasioning a stagnation of the air and noxious exhalations from our earth; the winds that succeed purify this air: the sudden change of the sensible and insensible qualities of this fluid, by producing indirect debility, which this disease is chiefly founded in, and which encreases the afflux of fluids in the arteries of the head, and produces distention, or more frequently effusion, destroys the mobility, or energy of the nervous power in the brain. Hence a stagnation, and its consequences, rupture, effusion, and death. Of the many and numerous cases which came under my notice, in this city, I shall mention in these observations but three. Friday, May 16, 1793, I visited a young man, twenty-five years of age, who was seized with an apoplexy, which proved fatal in five minutes. On the twenty-second of June, I saw another case, which also terminated in death; and on the thirty-first of Dec. a woman, aged fifty-three, was instantly carried off in the same manner: these cases were within the periods of the moon. In Providence, Rhode-Island, on Monday morning, January thirteenth, 1794, died of an apoplectic fit, Miss B—— R——, in the bloom of youth and health; having gone to bed the preceding evening well, she was found the next morning affected with this complaint; the moon was full on the sixteenth instant, at ten minutes past ten o'clock.

That species of apoplexy formerly denominated sanguineous, in which there is a plethoric state of the vessels of the head, attended with red face, laborious respiration, often comes on suddenly at the periods, with symptoms violent and fatal, especially to persons above fifty; whereas the serous apoplexy, with

a defect of action sometimes attacks in the intervals. Bleeding is most beneficial at the periods, from the carotic arteries or jugular veins, which should demand our first attention ; also should be used to take off the irritation from the brain.

The hydrocephalus internus frequently attacks full, robust, healthy, active and lively children at the periods : in the recent state, there is an intollorance of light from the great sensibility of the eyes, which obliges me to favour Dr. Quinn's theory, delivered in his inaugural dissertation, " that, it depends on an inflammation of the brain, and that the effusion is the effect and not the cause." I have cured one case by bleeding.

Periodical palsies often appear within the periods, (Piso and Tulpius, speaks of her bringing on periodical palsies,) which are caused by an overflow of putrid bile in the stomach at this time, and which a puke sometimes has cured.

Women, and people of delicate constitutions, are sometimes subject to syncope at the periodical revolutions of the moon, when the face has not that death-like appearance, but is florid, the eyes are troubled, and the mouth is shut ; the causes of this disease are to be particularly avoided at this time ; blood-letting is absolutely necessary at the periods, a recumbent posture and cold water thrown on the head and face succeeds here. Syncope often attends at the periods ; in the recent state of acute diseases, it is by no means a favourable symptom. By attending to lunar influence, I am enabled to prognosticate with more certainty the return, issue, and cure of these diseases.

Dyspepsia is both ideopathic and symptomatic, whenever it attacks weak and delicate habits, at the periods. It is produced by various causes, as the increased secretion of bile, in the first passages, which act immediately on the stomach, or on it through the medium of the whole system : the sick head-ach

in nine out of ten cases, accompanies this disease at the periods; and in some cases the circulation is so languid that the blood stagnates and the face becomes livid, swelled and has an unusual appearance. As there is always an uneasiness in this organ, an emetic is the cure, with an attention to the relation of aliments.

Convulsions often attack and return at the new and full moon, in middle-aged robust men, rather than women or old people: it is no uncommon disease for children to have at the periods*. Acrid matters, as bile in the alimentary canal, is the most frequent cause of it in them. There is often a considerable action of the nervous system at the periods, which is to be taken down by bleeding, vomits and cold air. In May 1793, I was called to see a child five years old, laying in convulsions, for the first time, within the periods. This child was bled three times before she recovered. Fits at the beginning and close of fevers, and pregnant women, at the periods, are unfavourable symptoms.

Strong people, men and children delicately educated, are often subject to first attacks and relapses of epilepsy within the periods, the paroxysms are attended with highly inflammatory symptoms, which generally continue thro' life. The moon, says Galen, governs the periods of epileptic cases, which is also confirmed by Drs. Pitcairne, Tyson, of Bethlehem hospital, and the celebrated Mead.† There are many occasional causes of epilepsy; two of which I shall mention, being the most frequent by the moon's influence at the periods; first, the periodical occasional recurrence of the plethoric state of the brain, or an over-distention of the blood-vessels of that organ,

* Dr. Pitcairne also speaks of a "violent convulsion of the arm returning periodically twice a year, viz. in March and September, at full moon near the vernal and autumnal equinoxes."

† Dr. John Leake on the diseases of the viscera, page 400, says "many instances might here be brought to show the remarkable effects of lunar influence in diseases of the brain and nerves. Epileptic fits most frequently occur at the new and full moon; and madmen are then more violently affected with frantic ravings."

which is favourable to epilepsy ; and the retention of acrid matter in the alimentary canal, occasioned by the encreased secretion of bile, together with a costive habit. Among many, shall notice but three cases. S—H—, stone cutter, November 18th, 1793, the moon being full, was seized with two paroxysms by ten o'clock in the morning. He told me his fits always returned within the periods. Miss S—A—, aged nineteen, in the year 1785, was engaged to be married to a gentleman from Maryland, who disappointing her by marrying another lady, it occasioned an indisposition in the former lady, in which epileptic fits appeared, and continued after her recovery, returned periodically within the periods of the moon until her death, in the beginning of 1795. Mrs. W—, whose fits were brought on by the loss of an only brother, were continued near twelve years, and were governed by lunar influence. These observations were made from a long personal acquaintance with the above ladies*.

The spasmodic species of the asthma, attended with an excess of action in the vessels of the lungs, frequently occurs at the periods ; which Van Helmont and Sir John Floyer, have observed :† Bleeding is proper here ; also fixed air breathed into the lungs, is sometimes a remedy in this species of this disease within the periods.

I have observed that costiveness, and an encreased secretion of bile in the alimentary canal, to be fre-

* Dr. Darwin says, " the periods of hemicrania and of painful epilepsy, are liable to obey lunar periods both in their diurnal returns, and in their greater periods of weeks, but are also induced by other exciting causes."

† Dr. John Leake, on diseases of women, vol. i. page 384, says, the changes of air at the new and full moon, especially a little before the vernal and autumnal equinoxes have considerable influence on the health of all animals. At this time, storms and tempests generally prevail ; the air is rendered too light, and being insufficient to blow up the lungs, the blood cannot pass too freely through them. Hence difficulty of breathing and palpitation of the heart, attended with sleepiness and oppression.

quent at the periods ; now colic is generally produced by costiveness, and bile is supposed, by Dr. Quere, of Jamaica, to be a frequent cause of this complaint. Hence persons are most liable to first attacks and relapses of colic, accompanied with excess of action in the muscular fibres of the alimentary canal. On Wednesday, May 14th, 1794, being within the periods of the moon, I saw near six cases of the bilious colic ; observing at the same time a costive habit, and the encreased secretion of bile, to be the effects of the moon's influence. One of these cases was a girl, ten years old. I observed it for a few months return periodically with the full-moon.

Tho' children, from a peculiar weakness of constitution, are more subject to the cholera morbus than adults, yet it frequently affects the latter, attended with more inflammatory and bilious symptoms than in the intervals.* We should avoid sleeping with the windows open at the periods, as the weather is changeable, and our perspiration, being encreased, is more liable to be obstructed, and produce this affection.

Single and married women, of a sanguine plethoric habit, between the age of puberty and thirty-five, are most frequently attacked with hysteria within the periods of the moon ; when the face is preternaturally flushed, and an excess of action of the arterial system : August the 21st, 1793, at ten o'clock, A. M. the moon was full ; at the same hour the next day, was called to see a young woman with hysterical fits, of so violent a nature, as to require six or seven men to confine her : she was relieved by bleeding. Dr. Pitcairne and Carolus Piso mentions her influencing hysteria.

* Dr. John Peter Wade says, page 58, speaking of an officer, attacked with the gungle fever in the Ramghur district : " He is still, however, subject to considerable irregularity in the secretions of the bowels, especially at the periods of the moon."

